LONG RANGE TRANSPORTATION PLAN
ROADWAY COST ASSUMPTIONS

Pavement - 12' wide lanes made of 9" concrete pavement. Right turn lanes and dual left turn lanes were included at the half mile and quarter mile median openings.

Sidewalk - 5' wide concrete 4" thick on one side of the street.

Bike Trails - 10' wide, 5" thick concrete on one side of the street.

Landscaping - Minimal landscaping in the 28' wide medians.

Pedestrian/School Traffic Signal - Estimated at one per mile.

Traffic Signal - Full intersection signals will likely be needed at the mile, mid-mile and quarter mile intersections, for a figure of 3.5 traffic signals per mile.

Street Lighting - Estimated at 28 poles per mile to meet LES standards.

Storm Sewer - Installation of storm sewer along the length of the project and extending the existing system as necessary.

Water Line - Adjustments to existing lines and valves due to roadway grade changes. Addition of fire hydrants at 420' spacing on both sides of the street as required by the Fire Department.

Waste Water - Resetting manholes and possible service adjustments necessary due to roadway grade changes.

Box Culverts - Costs for culverts range from $30,000 to $180,000, depending upon the size needed and the installation conditions. Since each roadway segment may or may not require one or more box culverts, an average of $75,000 was used for the per mile cost.

Retaining Walls - These minimize construction cut or fills and the costs associated with those. With additional right-of-way being acquired, retaining wall use may be reduced, but additional cut and fill costs would result. Used 10,000 square foot of wall per mile.

Trail Crossing Grade Separations - Included for projects where they have been identified in the Comprehensive Plan.

Bridges - Included 300' of 4 lane bridge on projects where bridge construction is required.

Costs not included but that could potentially be needed:

Excessive Cuts/Fills - In order to eliminate sight distance or drainage problems, existing road beds may need to be changed drastically.

Underground LES Lines - The cost to move existing electric lines underground and make the necessary connections.

Right-of-Way Acquisition - Ten foot acquisition per mile cost at $.50 per square foot in fringe areas is $26,400. In developed areas, acquisition cost was based on costs associated with 70% residential, 25% office and 5% commercial development along the segment. Ten foot acquisition per mile cost is $198,000.

Wetlands/Flood Plain/Native Prairie/Endangered Species/Cultural Resource - These vary greatly by impact and location. Costs can easily exceed $150,000 per mile.

OTHER ASSUMPTIONS

The streets selected for the first 12 years are in conformance with the instructions from the Mayor to comply with the Comprehensive Plan. They also follow the full Committee's instruction to use Category 5 option as the option to do this. The costs shown are for the ultimate section as shown in the Comprehensive Plan, however, that it is recognized the Work Group will look into whether the streets can be staged or phased differently.

The Comprehensive Plan designations are based on what will be needed with the projected volumes in the year 2025. A 2 + 1 suburban arterial is expected to have a capacity of 12,000 vehicles per day, beyond that, a 4 + 1 roadway is required.

The Comprehensive Plan and volumes resulting from it use the assumption that the West Bypass will be built to freeway standards. It also assumes the South and East Beltways will be completed, as well as the Antelope Valley project.

National standards, as outlined by the American Association of State Highway and Transportation Officials (AASHTO), the Manual on Uniform Traffic Control Devices, the Transportation Research Board and the Institute of Transportation Engineers were used for all design parameters of the roadways.